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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------------------------------------------------------|-------------|-----------------------|---------------------|------------------|
| 09/857,204 | 09/18/2001 | Richard Malcolm Kelso | P21154 | 6189 |
| 7055 | 7590 | 08/17/2006 | EXAMINER | |
| GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191 | | | SORKIN, DAVID L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1723 | |

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/857,204 | KELSO ET AL. | |
| | Examiner | Art Unit | |
| | David L. Sorkin | 1723 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 38-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 38-71 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>06 March 2006</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Specification

1. The amendment filed 07 June 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The redefinition of the "internal periphery" and "external periphery" of the flow divider to repugnantly refer to the bluff body and cup wall is considered new matter. The comparative statements concerning the internal and external peripheries are considered new matter.
- The statement "A center of any of the at least one second fluid inlets shown in Figure 3 is closer to the external periphery (defined by the cup wall) than a center of any of the at least one mixed fluid outlet 12" is considered new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

2. Applicant is advised that should claim 38 be found allowable, claims 57 and 59 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). The requirements of dependent claims 57 and 59 are already required by the independent claim 38.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 38-71 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement:

5. In claim 38, the redefinition of the internal and external periphery of the flow divider in the specification, discussed above, to refer to parts other than the flow divider, indirectly introduces new matter to the claims. See *In re Wright* 9 USPQ2d 1649 (Fed. Cir. 1989).

6. Regarding claims 59 and 60, in the originally filed drawings and specification, "h" refers to the distance between the opening at the upper end of an inlet conduit to the bottom end of the chamber, through which the inlet conduit passes. The 07 June 2006 amendment changes the definition of "h" so as to contradict the specification and drawings.

7. Regarding claims 70 and 71, there is no support for the comparative limitation concerning the internal and external peripheries. The locations of the centers of inlets and outlets relative to the internal and external peripheries was not a concept which applicant showed possession of upon filing the original application.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claims 38-71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

10. Because the specification has been amended to include a repugnant definition of internal and external periphery, the recitation of "a flow divider defined by an internal and external periphery" in claim 38 renders the claim indefinite.

11. Regarding claims 61-64, given that independent claim 38 recites "a cup defining a chamber", the recitation in claim 61 "wherein said chamber is formed by a generally cup-shaped body" is confusing.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 38, 45, 46, 56-59 and 61-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Patterson et al. (US 384,068). Regarding claim 38, Patterson ('068) discloses a device comprising a cup (A) defining a chamber; a bluff body (H) extending across and substantially closing one end of the chamber; a first fluid inlet (D) at an opposite end of said chamber from said bluff body and arranged to direct a jet fluid flow into the chamber toward said bluff body; a flow divider (G, C and optionally c') defined by an internal periphery and an external periphery and disposed in a region substantially surrounding said bluff body and extending from with said chamber to

outside said chamber (see Fig. 1); at least one second fluid inlet (defined between G and A) defined by said flow divider in said region substantially surrounding said bluff body and arranged to direct a fluid flow opposing the jet fluid flow into the chamber; and at least one mixer fluid outlet (from between H and G) from said chamber defined by said flow divider in said region substantially surrounding said bluff body. Regarding claim 45, said flow divider defines a series of low channels which form said second fluid inlets and said mixed fluid outlets (see Figs. 1 and 2). Regarding claim 46, "the manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself" *In re Casey*, 152 USPQ 235 (CCPA 1967).

Regarding claim 56, the flow divider protrudes beyond the bluff body (see Fig. 1).

Regarding claim 57, the flow divider extends into the chamber (see Fig. 1). Regarding claim 58, said first fluid inlet extends toward said bluff body from said opposite end of said chamber (see Fig. 1). Regarding claim 59, the spacing h of an opening (I) of the first fluid inlet from said bluff body satisfies the relationship $0 < h/L < 1$, where L is the distance from the opposite end to the bluff body (see Fig. 1). Regarding claim 61, said chamber is formed by a generally cup-shaped body (A) with side bluff body disposed at or adjacent an open end of said cup shaped body. Regarding claim 62, said first fluid inlet is centrally disposed in the of said cup-shaped body (see Fig. 1). Regarding claim 63, said flow divider extends between the wall of said cup-shaped body adjacent the open end and said bluff body (see Fig. 1). Regarding claim 64, said flow divider is fixed to the wall of said cup-shaped body (see Fig. 1). Regarding claim 65, said device is a burner (see title). Regarding claim 66, while the Patterson ('068) expressly discloses

that said first fluid inlet supplies combustible fuel and said second fluid inlets supply combustion air to the chamber (see page 1, line 66 to 80), “the manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself” *In re Casey*, 152 USPQ 235 (CCPA 1967). “Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Regarding claims 68 and 69, “the manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself” *In re Casey*, 152 USPQ 235 (CCPA 1967). “Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, “inclusion of material or article worked upon by a structure being claimed, does not impart patentability to the claims” *In re Otto* 136 USPQ 458, 459 (CCPA 1963). Regarding claim 70, said at least one mixed fluid outlet is defined by a greater portion of the internal periphery than said at least one second fluid inlet, and said at least one second fluid inlet is defined by a greater portion of the external periphery than said at least one mixed fluid outlet (see Figs. 1 and 2). Regarding claim 71, a center of any of said at least one second fluid inlet is closer to said external periphery than a center of any of said at least one mixer fluid outlet (see Figs. 1 and 2).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson et al. (US 384,068). The device of Patterson ('068) was discussed above. Though numerical values are not discussed by Patterson ('068), as depicted in Fig. 1, the h/L ratio is approximately 0.4. It is considered that it would have been obvious to one of ordinary skill in the art to have optimized the spacing of the inlet and/or bluff body, to create a particular air flow. See page 1, lines 65-90 for a discussion of spacings and air flow.

Response to Arguments

16. Applicant states that two paragraphs have been added to the specification to address the written description requirement of section 112, first paragraph; however, only the application as originally filed is germane to the requirements of section 112, first paragraph.

17. Applicant's arguments regarding Collins ('258) are moot as this reference is not relied upon in rejecting the currently amended claims.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 571-272-1148. The examiner can normally be reached on 9:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David L. Sorkin
Primary Examiner
Art Unit 1723

DLS